



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/614,849	07/12/2000	Kiyotaka Iwata	U 012852-3	2520
140	7590	10/10/2003	EXAMINER	
LADAS & PARRY 26 WEST 61ST STREET NEW YORK, NY 10023			SCHIFFMAN, JORI	
			ART UNIT	PAPER NUMBER
			3679	

DATE MAILED: 10/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/614,849

Applicant(s)

IWATA, KIYOTAKA

Examiner

Jori R. Schiffman

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 and 17-23 is/are pending in the application.
- 4a) Of the above claim(s) 1-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 July 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the maximum height of the edge of the locking projection from the bearing surface of the head being nearly equal to and less than P/n as recited in claim 17 must be shown or the feature canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The disclosure is objected to because of the following informalities: The “planar portions” and “total area of the planar portions” recited in claims 17, 18, and 23 are not described in the specification. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Art Unit: 3679

4. Claims 18, 20, and 22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. The phrase "machine screw" in claim 18 is considered to be new matter since it was not previously described in the disclosure. The claims have been examined as best understood.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 17-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase "fastening a member soft as magnesium or aluminum" is indefinite because it is unclear what is as soft as aluminum and magnesium since numerous alloys may be formed from each metal. Appropriate correction is required. The claims have been examined as best understood.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3679

8. Claims 17, 19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuzuki et al. (JP 2-89805).

Tsuzuki discloses a self-locking bolt 15 fastening a soft member, wood, comprising a head 16 having a locking function, a threaded part 8 extending from the head and provided with an external thread 11 of a pitch  $P$ , the external thread being capable of mating with of a member to be mated, which is capable of being formed with an internal thread, wherein  $n$  locking projections 22 are formed at equal intervals on a bearing surface of the head, the locking projections being separated from one another by planar portions 18 of the bearing surface, heights of the locking projections 22 from the bearing surface increase gradually in a direction opposite a fastening direction, there are edges at maximum heights, the heights of the locking projections decrease steeply from the edges in a direction opposite the fastening direction, the maximum heights of the edges are equal to or less than  $P/n$ , a total area of the planar portions is larger than a total planar projected area of the locking projections, and depending upon the application, the bolt could have a small diameter not larger than 6 mm.

9. Claims 18, 20, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olsen (US 2128757).

Regarding the claims, Olsen discloses a self-locking bolt capable of fastening a soft member and having a head 14 with a locking function and a threaded part 12 extending from the head and provided with an external thread of pitch  $P$ , the external thread being considered a “machine screw”, wherein  $n$  locking recesses 38 are formed in

a peripheral region of the bearing surface of the head, extend from a circumference of the head to the threaded part, and are located at equal angular intervals in a bearing surface of the heads, the recesses separated from one another by planar portions of the bearing surface 32, the depths of the recesses from the bearing surface decreasing gradually in a direction opposite a fastening direction in which the head is rotated for fastening to minimum depths, there being edges at the joints of end walls of the recesses at positions of maximum depths from the bearing surface, when the bearing surface compresses a member contacting it, the edges function so that a portion of the member is forced to bulge into at least one of the locking recesses in a small protrusion (see Fig. 6), a total area of the planar portions is larger than a total planar projected area of the locking projections, and depending upon the application, the bolt could have a small diameter not larger than 6 mm.

### ***Response to Arguments***

10. Applicant's arguments with respect to claims 17, 19, and 21 have been considered but are moot in view of the new grounds of rejection.

11. In response to applicant's argument that Olsen fails to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the member not having an internal thread) are not recited in claim 18. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Furthermore, even if claim 18

Art Unit: 3679

included the limitation of the member having an internal thread, the member in Olsen would be capable of being formed with an internal thread.

12. Applicant also argues that the references fail to directly disclose “the maximum height of the edge of the locking projection from the bearing surface of the head [being] nearly equal to and less than  $P/n$ ”. In response, the examiner disagrees because applicant is reminded that “things clearly shown in reference patent drawings qualify as prior art features, even though unexplained by the specification.” *In re Mraz*, 173 USPQ 25 (CCPA 1972). Since the claims require the ratio  $P/n$ , if that ratio is shown in the drawings of the reference, the reference reads on the claim.

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited further to show the state of the art with respect to self-locking bolts in general: U.S. Pat. No. 6394725 to Dicke.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jori R. Schiffman whose telephone number is 703-305-4805. The examiner can normally be reached on M-Th, and every other Friday.

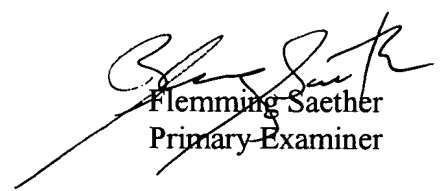
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on 703-308-1159. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Art Unit: 3679

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-1113.

Jori R. Schiffman  
Examiner  
Art Unit 3679

JS



Flemming Saether  
Primary Examiner